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Minority Support: School District Demographics and Support for Funding Election Measures

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Abstract

In the context of tight state budgets, local education funding is increasingly important. This article examines the relationship between district-level demographic characteristics and voter support for tax increases to fund the local school district. Using district-level panel data on California school district elections and demographics from 1995 to 2014, we ask the following questions: (1) What is the relationship between demographics and support for school district tax measures? and (2) Does this relationship vary by the type of tax measure? Results suggest that voter support varies by district demographics. However, results differ for bond and property tax measures and suggest that the proportion of Black students increases the likelihood of passing a bond measure but reduces the likelihood of passing a property tax measure. This heterogeneity offers one potential explanation for contradictory evidence in the literature. Results have implications for racial inequality of educational resources between districts.

Keywords

opportunity hoarding; school finance; California; taxation; school bonds

Introduction

School funding is one of the most contentious issues in state and local politics (Kincaid 2016). This is partly because schools in the United States are funded largely by local taxes, such as the property tax, which is among the most disliked taxes in America (Cabral and Hoxby 2015; Fisher 1996; Martin 2008). On average in 2014, federal K-12 funding accounted for approximately 8% of total school revenues, while state and local sources provided nearly 92% of school funding (U.S. Census Bureau 2014). Despite the name, state-level revenue often originates from property and other local taxes that are collected and then redistributed to school districts through a statewide funding formula. Since the pivotal

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Supplemental Material

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Serrano California Supreme Court decision in the 1970s, school funding inequalities have persisted despite equalization efforts.

While school funding is highly localized, broader trends are discernible in the politics of school funding. The first is a diminishing level of funding across states. Most states cut support for schools during the recession—in several states by over 10% (Leachman, Masterson and Wallace 2016)—and local funding was largely unable to make up this difference. The inability of local funding sources in most areas to shore up the revenue lost from state sources highlights a second major trend: the resegregation of American schools (Fiel 2013, 2015; Reardon and Owens 2014). Recent research has argued that school segregation constitutes a mechanism of social closure (Fiel 2013) that is maintained through a process of opportunity hoarding (Hanselman and Fiel 2017; Tilly 1998). Like other forms of closure, “a school provides clear boundaries for access to potentially valuable resources” (Hanselman and Fiel 2017, p. 1080). Consistent with this argument, much school resegregation is *between*, rather than within, school districts (Fiel 2013; Reardon, Yun, and Eitle 2000) and between-district resource differences have implications for student achievement (Owens 2018).

In an era of state funding cuts for education, the ability to raise local revenue through tax increases could heighten preferences for opportunity hoarding and closure. Scholars have examined the effects of segregation on student outcomes, yet there is also a need to examine the mechanisms through which segregation influences student outcomes (Reardon and Owens 2014). This includes understanding the factors determining school district resources and how they relate to race and ethnicity (Reardon and Owens 2014).

This article investigates two possibilities for variation in local funding across school districts by examining the relationship between district-level demographic characteristics and voter support for local school district tax increases. First, we examine whether voter support for local tax increases varies by changes in the racial and ethnic composition of a school district. We suggest that local school district ballot initiatives may constitute a mechanism of social closure and opportunity hoarding. Parents working to garner resources for their children and others like them may be more likely to support local district tax measures when the students are less diverse. However, results of existing research are mixed, possibly due to heterogeneity by the type of funding measure. Thus, second, we investigate whether demographics have different implications for funding initiatives depending on the type of tax measure proposed: bond or property tax.

California school district tax measures provide a unique opportunity to explore these questions. California includes a relatively large number of school districts (approximately 1,000 in 2013) and revenue limits imposed by Proposition 13 in 1978 make the California school finance system highly centralized (Kirst, Goertz, and Odden 2007). At least until the 2013 Local Control Funding Formula, school district election measures are “essentially the only source of local discretion” (Cellini, Ferreira, and Rothstein 2010, p. 218). Many California ballot measures explicitly state that funds will remain in the district, illustrating the idea of hoarding. Furthermore, California school district election measures take two main forms: bond and property tax measures. Because school district property tax measures

are less progressive, offer a less visual benefit, and represent a more specific tax increase in the nearer future than bond measures, voter support for property tax measures may depend more strongly on district demographics.

This study contributes to a growing area of research which examines the conditions under which people vote to increase their taxes (Martin, Lopez, and Olsen 2019; Martin and Nations 2018; Pearson 2014). At the same time, it attempts to shed light on contradictory evidence in previous research by asking the following questions: (1) What is the relationship between demographics and support for school district tax measures? and (2) Does this relationship vary by the type of tax measure? We address these questions by analyzing 1,753 ballot measures and district-level panel data on California school district elections and demographics from 1995 to 2014. Overall, we find that the relationship between district demographics and support for tax measures differs by the type of measure. We also find that support for bond measures generally increases as racial/ethnic diversity in a district increases, but the opposite is true for property tax measures. Results offer potential implications for inequality of school resources in the context of declining state funding and rising segregation.

Taxpayer Citizenship and Boundary Work

Research on public finances has tended to focus on public opposition to taxes (Block 2009; Martin 2008), but sociologists and political scientists have recently started to explore the conditions under which people support tax increases (Pierson 2014; Williamson 2017). Contrary to commonly held belief, Americans generally tend to be pro-tax and, indeed, even express pride in being a taxpayer (Williamson 2017). Moreover, Americans also hold favorable views about how tax revenue is spent. As Williamson noted (2017, p. 80), “Americans express something close to consensus on the value of certain local public investments, like roads, schools, and public safety.” However, pro-tax sentiments decrease when people feel others, particularly immigrants and racial/ethnic minorities, abuse the system and get away with it (Williamson 2017).

The feeling that members of an outside group might benefit disproportionately from taxpayer money creates symbolic and material boundaries. There are two main types of boundary work: social boundaries and symbolic boundaries (Lamont and Molnár 2002). Social boundaries refer primarily to “objectified forms of social differences manifested in unequal access to and unequal distribution of resources,” whereas symbolic boundaries are “conceptual distinctions made by social actors to categorize objects” (Lamont and Molnár 2002, p. 168). These two types of boundaries are present simultaneously in social situations and “symbolic boundaries can be thought of as a necessary but insufficient condition for the existence of social boundaries” (Lamont and Molnár 2002, p. 168). How resources are distributed or redistributed in any given institution often highlight these two types of boundaries.

School districts in the United States provide an example and illustrate both types of boundaries. School districts are government entities with the power to levy and collect taxes in a specific geographical area. Thus, the district line is an objective boundary

that sorts school-age children and families geographically. But district boundaries also implicate access and distribution of important resources and public goods, namely, public education (Bischoff 2008). That is, school district boundaries create symbolic between-district distinctions by associating other valuable resources with objective district boundaries such as school achievement levels and property values (Figlio and Lucas 2004).

While the differences in resources may be apparent to house hunters (Bischoff 2008; Lareau and Goyette 2014), the mechanisms that drive these resources are more difficult to detect. A common explanation for asymmetrical resource distribution is found in Tilly's (1998) concept of opportunity hoarding which refers to members of the in-group (in this case, White voters) pursuing and accruing more resources for other in-group members (Rury and Saatcioglu 2011; Tilly 1998). However, unlike explicit racial threat hypotheses, opportunity hoarding perpetuates inequality through loyalty to fellow in-group members, such as members of a family or a neighborhood, rather than hostility to out-group members (Massey 2007). Nonetheless, opportunity hoarding is a mechanism that maintains a "racialized tax structure." While racialized tax structures produce and sustain racial inequalities through various measures, not only hoarding (see Henricks and Seamster 2017), they still result in the movement of resources away from racial out-groups toward dominant racial groups (in this case, Whites).

School district taxes offer one example of this cyclical hoarding pattern. In this case, White voters in local elections, who outvote Black, Latino, and Asian-Americans by significant margins (often two to one; Hajnal and Trounstein 2005), may support a tax increase for their local district if it benefits those like themselves.

Race, Ethnicity, and Public Finance

Racial and ethnic divisions have shaped the development of American tax systems since the colonial era (Einhorn 2000, 2001, 2006) Taxes represent a tangible connection and obligation to strangers in our community (Walsh 2018). However, this sense of obligation and the tax structures associated with it are often bounded by racial divisions. Historically, Whites have used the tax structure to hoard public resources and opportunities. For instance, after Reconstruction, many states began to adopt compulsory school attendance laws (Rauscher 2016). States experimented with how to fund schools before largely settling on a local tax funding approach, which initially relied on appropriating local (and segregated) school funds based on the real estate or poll taxes paid by Blacks and Whites, creating a racially distinct tax base (Walsh 2018). However, establishing a link between taxpaying and entitlement to education incentivized hoarding. White schools would often appropriate funds raised by Black taxpayers as a way to keep tax rates low on Whites (Walsh 2018). Likewise, southern Whites often resisted school desegregation by defeating school bond referenda (Priest and Fox 2005; Wainscott and Woodard 1986). And in Alabama, changes to the state's constitution limited White's property taxes from being redistributed to Black schools (Newman and O'Brien 2011). The same practice of diverting Black-generated tax money toward White institutions extended to the practice of redlining, where many local governments taxed Black taxpayers more heavily than Whites (Rothstein 2017).

Race, Ethnicity, and Public Spending

Although explicitly racist tax structures are less visible today, “colorblind taxation” (Walsh 2018, p. 5) continues to shape American public finances. Public opinion research has consistently demonstrated that Whites rate public spending programs higher when they feel the benefits of those programs go toward others in their racial group (Luttmer 2001). For instance, Martin Gilens’s (1999) influential study showed that White antagonism toward welfare spending is primarily driven by anti-Black sentiment. More recent work by Goren (2003, 2008) and Winter (2006) supports these findings, suggesting that Whites who harbor negative attitudes toward Blacks are more opposed to welfare spending. Moreover, actual state spending on welfare programs, such as Temporary Assistance to Needy Families (TANF), is negatively influenced by the Black population of a state (Rogers and Tedin 2006). In addition to anti-Black sentiment, researchers have noted the same pattern of resentment toward Latinos (Fox 2004) and research has demonstrated a link between anti-immigrant views and low support for welfare and redistribution (Brady and Finnegan 2014; Dahlberg, Edmark, and Lundqvist 2012).

Less research has examined how race and racial attitudes impact preference for tax structures, but research suggests a similar link (Edsall and Edsall 1991; Jacobs and Helms 2001; O’Brien 2017; Sears and Citrin 1982). For instance, research has demonstrated that not only does the presence of non-Whites reduce efforts to increase taxation, the presence of non-Whites reduces the preference for a progressive, redistributive tax structure (O’Brien 2017). In addition, racial differences have been found to explain differing levels of support for property tax limitation measures (see Martin and Beck 2017).

For White taxpayers, these concerns also extend to immigrants, particularly undocumented immigrants. Although undocumented immigrants pay an estimated US\$11.74 billion in state and local taxes (Institute on Taxation and Economic Policy 2017), they are still often portrayed as burdens on the public finance system (Calavita 1996). (In fact, estimates suggest undocumented immigrant’s tax contributions are particularly high in California, approximately US\$3.2 billion annually [Gee, Gardner, Hill, and Wiehe 2017].) Williamson (2017), for instance, found that concerns over immigration and, in particular, the unfounded concern that immigrants are not paying taxes, plays a role in how White Americans view the fairness of the tax system.

While racial and ethnic heterogeneity is often associated with opposition to public spending and taxes, racial homogeneity can also promote support for taxes. As Foster (2012, p. 194) wrote, “When the poor and nonpoor tend to be of the same ethnicity, state and local governments tend to utilize tax structures that are more progressive.” Likewise, Hopkins (2009) found that, while diversity alone does not limit the chances that voters will vote to increase property taxes, sudden changes in demographics do reduce willingness to raise taxes. Work on the distribution of public services has found similar patterns. Researchers have noted a link between an increase in ethnic and racial diversity and lower rates of social service spending. For instance, researchers have found that increasing diversity in communities tends to be associated with a decrease in the investment of public goods (Alesina, Baqir, and Easterly 1999; Beach and Jones 2017; Habyarimana et al. 2007;

Trounstine 2016). And Hall and Hibel (2017) find evidence that White migration into and out of school districts is associated with the growth of Latino students in the district.

Race, Ethnicity, and School District Finance

In contrast to other public spending, such as welfare, support for public education may follow different patterns. For example, researchers have found little evidence of a relationship between anti-Black prejudice and Whites' preferences toward government spending on public education. Gilens (1995, p. 1008), for example, found that “[a]lmost no [W]hites, regardless of racial attitudes, want to cut spending for public schools.” Similarly, Winter (2006, p. 416) also found “no general pattern of racialization, either by policy or by year” when it comes to Whites' attitudes toward spending on items including education.

School districts offer taxpayers an opportunity to see local benefits from their taxes. Although local school district funding offers a likely example of opportunity hoarding, research investigating the relationship between demographics and district funding reports mixed findings. For instance, some research has found that as a community becomes more racially or ethnically diverse, support for school funding diminishes (Ajilore 2017; An, Levy, and Hero 2018; Cataldo and Holm 1983; Glaser 2002; Silverman 2011; Tedin 1994; Tedin, Matland, and Weiher 2001). However, other evidence suggests no relationship between racial or ethnic composition of school districts and support for a bond or referendum measure (Ehrenberg et al. 2004; Zimmer et al. 2011).

At the same time, studies have also found a positive relationship between support for spending and local racial diversity. For instance, researchers have shown that racially diverse communities are more likely to be more supportive of education spending in general (Button 1993; Priest and Fox 2005) and more likely to raise taxes on themselves (Boustan et al. 2013). Rugh and Trounstine (2011) found that racially diverse communities, while likely to see fewer bond elections, approve bond measures at higher rates. Other research also suggests that ethnic diversity does not tend to reduce public spending (Corcoran and Evans 2010; Dahlberg, Edmark, and Lundqvist 2012; Gerdes 2011; Hopkins 2011; Lee, Lee, and Borcharding 2016; Levy 2014). In their analysis of school bond measures in Texas, Bowers and Lee (2013) found that the percentage of Asian and Hispanic students was positively related to the passage of a bond. Bali (2008) also noted that ethnic heterogeneity does not reduce school spending; however, she found that the local conditions of the school district matter a great deal, particularly for support among White voters (Bali 2008).

This review illustrates that the literature on the relationship between district demographics and ballot measure outcomes is not settled. One possible explanation for the different results is variation by type of ballot measure. District demographic characteristics could have different implications for the likelihood of passing a property tax measure compared with a bond measure. In other words, *how* opportunities are hoarded may matter.

We identify three potential reasons for variation by measure type. First, the purpose of the funds may differ. Since Proposition 46 in 1986, general obligation bonds were allowed “only for the acquisition or improvements of real property (e.g., fire and police stations, schools, streets and various public works projects)” (California Debt and Investment Advisory

Commission 2008, p. 10). Proposition 39 stipulated that “Bond proceeds can be used only for construction, rehabilitation, equipping school facilities, or acquisition/lease of real property for school facilities” (California Debt and Investment Advisory Commission 2008, p. 10). Although district property tax measures (e.g., parcel tax elections) frequently target facility improvements, they can also be used to support general operating expenses. Operating expenses are less visible to taxpayers or voters and may seem less beneficial. For example, voters can attend events at a school building or use the school grounds, but they do not get the same personal benefit from school operating expenses. Therefore, voters may be less likely to support property tax measures if those who will benefit are more racially diverse.

Second, the time horizon may differ. Specifically, property tax measures often have shorter or more specific lengths of revenue collection (e.g., 3–7 years for parcel tax measures; Jennison 2017). Thus, property tax measures are paid by current (or near-future) voters and benefit current students. In contrast, bond measures ask voters to take on debt to be repaid over time (i.e., in the future). Bond measures propose to raise up to a specified amount of funds by selling bonds at a maximum tax rate. However, the property tax increase implicated by a bond measure is unclear because it varies depending on the timing and amount of bonds sold, the type of bonds (current interest or capital appreciation bonds), the amount of interest the district must pay each year, the amount of principal the district needs to save each year to repay when the bond matures, and property value assessments (Dayton 2015; Jennison 2017). Capital appreciation bonds became legal in 1993 and allow districts to repay bonds many years in the future, with compounded interest (Dayton 2015). Because bond measures incur debt to be repaid in the future and represent vague tax increases, diversity may not reduce support for bond measures. In contrast, property tax measures create a specific tax increase in a short time horizon, so we expect diversity to reduce support for property tax measures.

Third, the revenue stream may differ. For example, bond measures can be supported with taxes other than property tax (e.g., sales tax), making them less salient (Cabral and Hoxby 2015; Fisher 1996; Martin 2008). Furthermore, because of California property tax rules, school district property tax measures are generally for parcel taxes, which are regressive. Owners pay by the amount of land owned, rather than its value. Thus, property tax measures may be less progressive than bond measures. If diverse Black or Hispanic populations support progressive tax measures and not regressive tax measures (Boustan et al. 2013; Rugh and Trounstein 2011), then increasing diversity may increase support for bond measures and reduce support for property tax measures.

Because school district property tax measures are less progressive, represent a more specific tax increase in the nearer future, and provide a less visual benefit, the relationship between demographics and voter support may vary by the type of tax measure proposed. Finally, it is also worth noting that there could be informational and perceptual differences that impact the salience of how voters respond to property tax and bond measures. There are a variety of different reasons why voters may be unaware of local ballot measures (Nicholson 2003). And further, voters may approach a bond or a property tax measure differently. For instance, in Minnesota, school districts are required to state the property tax implications of bond

measures. Researchers have noted that this added piece of information helps explain lower rates of bond passage compared with other states such as Wisconsin (Brunner, Robbins, and Simonsen 2018). However, we are unable to gauge this possibility with our data.

In sum, public finances represent a symbolically and materially important aspect of boundary work. This is heightened when it comes to school district boundaries. Following the opportunity hoarding thesis, dominant racial groups—namely, Whites—pursue group self-interested actions to monopolize socially valuable resources. Based on the above review, we pose the following hypotheses:

Hypothesis 1: Consistent with opportunity hoarding, the proportions of Black and Hispanic students are associated with lower support for a school district funding measure.

Hypothesis 2: Racial diversity is associated with lower support for a measure.

Hypothesis 3: The above relationships differ for property tax and bond measures. (a) Diversity and the proportions of Black and Hispanic students lower support for property tax measures due to a less visible use of funds, shorter time horizon, and more regressive tax structure than bond measures. (b) Diversity and the proportions of Black and Hispanic students increase support for bond measures due to their more progressive tax structure than parcel tax measures.

Research Methods

Data

To test these hypotheses, we examine school district funding election measures from 1995 to 2014 in California. California is an interesting state to study for the purposes of local fiscal politics because of the legacy of Proposition 13 and the *Serrano v. Priest* court decision (Martin 2006, 2008; McCubbins and Seljan 2018). These two events have created a unique political environment in the state around the issue of school funding. The *Serrano* decision mandated that the state reduce inequality of educational spending by school district property tax base. In addition, California school districts have revenue limits since Proposition 13 to limit property tax burdens and increase equality. Proposition 13 limited the property tax rate in California, but parcel taxes circumvent that limit by adding a flat tax on each parcel of land with support from 2/3 of school district voters (Jennison 2017). Parcel taxes apply equally regardless of the property value, which makes them regressive—taxing poorer areas in a district at a higher rate than wealthier areas. Parcel tax measures provide a rare opportunity to increase district revenue in California and districts with more advantaged residents may be more likely to support one. Proposition 13 mandated that local taxing authorities achieve a supermajority 2/3 vote to increase taxes. Proposition 13 also mandated this for school bond elections. However, in 2000, Californians passed Proposition 39 which reduced the supermajority requirement for school bonds to 55% instead of 2/3 supermajority. Thus, school district election measures provide a unique mechanism for school districts to increase revenue through local taxes (Cellini, Ferreira, and Rothstein 2010; Jennison 2017). Outcomes therefore matter to parents and voters with interests in property values, tax burdens, and school quality.

To understand what characteristics relate to the likelihood of passing district funding measures, we gather data from several sources. School district election outcomes are drawn from the California Elections Data Archive (CEDA; ISR 1995-2014). School district demographic data are pulled from the National Center for Education Statistics (NCES) and California's Ed-Data (Education Data Partnership). District income, poverty rate, and population size are gathered from the U.S. Census Bureau Small Area Income and Poverty Estimates. Data from these three sources are merged using NCES district ID numbers. Including school district election measures with demographic information from 1995 to 2014, our dataset contains 1,753 ballot measures in 679 districts. (We limit analysis to one election per year in each district to allow change in demographic characteristics, which are measured annually.) The vast majority (77%) are general obligation bond measures, 22% are property tax measures, and 1% are measures related to other types of taxes (e.g., business, sales) or bonds (Mello/Roos bonds or Gann Limit measures, to extend the timing of previous parcel tax measures).

Measures

Voter support.—We measure support for an election measure in two ways. First, we create an indicator for whether the measure passed. The cutoff required to pass varies by the type of election measure, so passage may not indicate the same level of voter support. Therefore, as a second measure, we examine the total number of votes on a ballot measure (logged to reduce skew). Sensitivity analyses also examine the proportion of voters who voted for a ballot measure, which we refer to as vote share. In each case, we control for district population size (logged to reduce skew) to address changes in district size over time.

Demographic characteristics.—We predict voter support with several district demographic measures, including the proportions of students who are Black and Hispanic, and the Ethnic Diversity Index, which is one minus the sum of the squared proportions of the total student population from each racial group and measures the probability of not picking two students of the same ethnic/racial background at random (i.e., the probability of picking two students from different groups at random). This index provides a measure of the distribution of students across racial and ethnic categories. Higher values indicate more even representation of students across groups.

Control measures.—We control for characteristics that could influence both district demographics and voter support for a tax measure. The baseline model includes total student enrollment (logged to reduce skew), total district population (logged), and district school-age population ages 5 to 17 (logged). The full model also includes county median income adjusted for inflation to 2014 dollars, district school-age poverty rate (among those ages 5–17), federal revenue per pupil (in thousands of 2014 dollars), percentage eligible for free or reduced price lunch, percentage English Language Learners, and percentage special education students. In models predicting whether a measure passes, we also control for the total number of votes on a measure (logged).

Analytical Approach

Voters from certain districts may be more likely to support election measures for various reasons. For example, some school districts may be better at gauging potential voter support for a local finance measure than others. Wealthier districts or those with more owner-occupied housing may have more ability and interest in supporting local schools. To address these and other potential differences between school districts, we predict voter support for an election measure with demographic measures in models including district and year fixed effects. District fixed effects account for stable differences between districts and allow examination of changes in voter support for measures over time. Year fixed effects account for changes over time that could affect all districts (e.g., the economic recession or changes in the proportion of support required for a measure to pass).

Because voter support may be changing over time, we also include a state time trend in all models. The concern here is that demographic changes could be correlated with trends in support for local finance election measures (e.g., due to declining wages or employment opportunities). Controlling for the state time trend addresses the possibility that voter support is increasing or decreasing over time and disentangles estimates of demographic changes from unrelated trends (see Autor 2003; Wolfers 2006, for examples using state time trends).

Equation (1) predicts district-year voter support with district (i) and year (j) fixed effects, state time trend (Y_{ij}), measures of district demographics, and time-varying controls (X_{ij}) for district characteristics:

$$\text{Pass}_{ij} = a + \beta_1 \% \text{Black}_{ij} + \beta_2 \% \text{Hispanic}_{ij} + \beta_3 \text{EDI}_{ij} + \beta_k X_{ij} + Y_{ij} + \tau_i + \pi_j + \varepsilon_{ij}. \quad (1)$$

The coefficients of interest (β_{1-3}) estimate whether voter support for a measure changes with district demographics. For example, if those coefficients are negative, that would support Hypotheses 1 and 2 and suggest that voter support decreases with an increase in Black, Hispanic, and more diverse populations. Robust standard errors are adjusted for district-level clustering in all models. To allow comparison of coefficients, we show regression results using standardized independent variables.

We estimate models including the full sample of tax measures and then limit the sample to bond measures or property tax measures to examine heterogeneity by type of ballot measure. We use z -tests to calculate whether coefficients predicting bond and property tax measures differ (Paternoster et al. 1998).

Analyses predicting whether a ballot measure passes use linear probability models because: results are more comparable to analyses predicting vote share; interpretation is more straightforward; and there are methodological concerns about logit and other models that use nonlinear link functions (Ai and Norton 2003; Karaca-Mandic, Norton, and Dowd 2012; Mood 2010). Sensitivity analyses using logit models to predict whether a measure passes yield consistent results for percentage Black students when including all ballot measures, and estimates for percentage Hispanic students and diversity are in the same direction but

do not reach statistical significance. Logit models do not converge when predicting passing separately by ballot type.

Instrumental Variable (IV) Analyses

Results from the fixed effects approach described above may be biased by endogenous sorting of individuals into districts that are more supportive of tax measures for education funding (i.e., Tiebout sorting; Corcoran 2014). For instance, coefficients β_1 and β_2 in equation (1) would be biased upward if Black and Hispanic residents select into districts where residents are more supportive of education tax measures. These estimates would also be biased if Blacks or Hispanics are less able to move than other groups due to lower income and wealth. We apply an IV strategy similar to that used in previous studies to address potential geographic sorting (Boustan et al. 2013; Lee, Lee, and Borcherding 2016). Specifically, using data on the resident population of the United States by race and ethnicity (NCES 2017), we calculate national trends in percentage Black, percentage Hispanic, and ethnic diversity as the percentage change from the 1995 value for each year 1996–2014. We use these national trend measures as IVs to predict annual district-level demographic characteristics:

$$1 \text{ st stage: } = \begin{matrix} \% \text{ Black}_{ij}^* \\ \% \text{ Hispanic}_{ij}^* \\ EDI_{ij}^* \end{matrix} \left| \begin{matrix} \\ \\ \end{matrix} \right. = \begin{matrix} \Delta \% \text{ Black}_j + \Delta \% \text{ Hispanic}_j \\ \\ \Delta EDI_j + \beta_k X_{ij} + Y_{ij} + \tau_i + \gamma_{ij} \end{matrix} \tag{2}$$

$$2 \text{ nd stage: } \text{Pass}_{ij} = \% \text{ Black}_{ij}^* + \% \text{ Hispanic}_{ij}^* + EDI_{ij}^* + \beta_k X_{ij} + Y_{ij} + \tau_i + \epsilon_{ij} \tag{3}$$

Equations (2) and (3) show the IV approach, predicting district demographic measures in the first stage based on national trends and using those predicted values in the second stage to predict likelihood of passing a measure. Because the IVs represent national demographic trends, they are not influenced by local selection into particular districts in California. Thus, the IV approach allows us to estimate the effects of racial composition and diversity, unbiased by endogenous selection.

The fixed effects analyses are limited to district–year observations with a ballot measure. However, IV analyses require large sample sizes. Therefore, when using IV models, we code district–year observations without a ballot measure as zero on each dependent variable to maintain districts in the sample over all years from 1995 to 2014.

Concerns about any instrument include exogeneity (which cannot be tested directly), strength (IVs must substantially affect the endogenous variables), and monotonicity (IVs are related to the endogenous regressors in one direction). Applied to this study, the assumptions are that the national demographic trends (1) impact support for district tax measures only through district demographic composition, (2) significantly influence district demographics in California, and (3) do not perversely increase diversity in some districts

and reduce it in others. Because the IVs represent national demographic trends, we control for a statewide time trend to reduce concern that the IVs violate the exclusion restriction (i.e., directly impact change in support for tax measures). Statistical tests of IV strength, underidentification, and endogeneity of district demographic measures are reported for all IV models and support the IV approach.

Results

Table 1 provides descriptive statistics for the sample of district–year observations from 1995 to 2014 with demographic data. The first columns provide means and standard deviations for all district–years and the second section provides those statistics for district–years with a ballot measure. Examining the mean values for observations with a ballot measure, we can see that 69% of measures passed with an average of nearly 16,000 votes and an average vote share of 65%. Of the 1,753 school district ballots, 77% were for a bond measure and 22% were for a property tax measure. Compared with all district–years, those with a ballot have similar proportions of Hispanic students and are observed in the same year on average (*t*-tests indicate no difference between observations with and without a ballot on these measures). However, district–years with a ballot measure have a larger proportion of Black students, a higher index of diversity, a smaller proportion of White students, higher enrollment and population, higher median income, lower poverty, and higher proportion of English Language Learners and special education students. The *t*-tests indicate significant differences between district–years with and without a ballot on these measures ($p < .05$). These differences in the likelihood of holding a district ballot warrant examining within-district changes in the likelihood of passing (i.e., school district fixed effects).

The last section of columns provides mean values for observations with high values (above the median) of percentage Black or Hispanic students and high diversity measures. Observations with high values of these measures have higher mean pass rates, number of votes, and vote shares than all district–years. These differences are inconsistent with Hypotheses 1 and 2, but within-district analyses are required to address potentially important differences between districts.

Predicted Likelihood of Passing a Tax Measure

Table 2 provides within-district estimates of the relationship between the likelihood of passing a ballot measure and district demographics in standard deviation units, holding constant enrollment and population measures. Additional time-varying controls are included in the even-numbered models. The first two models predict passing for all ballots, models 3 and 4 predict passing a bond measure (i.e., limited to bond measures), and models 5 and 6 predict passing a property tax measure. All independent variables are standardized, to allow comparison of coefficients across models.

Results suggest that an increase in the proportion of Black students within a district is associated with an increase in the likelihood of a ballot passing ($p < .05$) when including all measures and when limited to bond measures. The likelihood of passing a property tax measure is not significantly related to the proportion of Black students in the full model.

Diversity is not related to the likelihood of passing a bond measure but is related to a lower likelihood of passing a property tax measure ($p < .10$).

Because the independent variables are standardized, the coefficients represent the change in likelihood of passing given a one-unit increase in the standard deviation of a measure. Thus, a one standard deviation increase in the proportion of Black students (7.4%) in a district is related to about a 10% increase in the likelihood of passing a bond measure. One standard deviation increase in the diversity index (0.17) in a district is related to a 16% increase in the likelihood of passing a property tax measure. The coefficients for enrollment and district population size are larger than those for other measures, suggesting that passing depends more strongly on changes in population size and enrollment than on the racial/ethnic composition of those in the district.

Table 3 provides results of IV analyses predicting the likelihood of passing a measure. After addressing concern about potential endogenous sorting into districts, results contradict Hypothesis 1 and suggest that an increase in the proportion of Black students increases the likelihood of passing any measure and, in particular, a bond measure ($p < .01$ in the full model). However, results suggest heterogeneous effects by race/ethnicity, because an increase in the proportion of Hispanic students ($p < .10$) and an increase in diversity ($p < .05$) reduce the likelihood of passing any measure or a bond measure. Thus, increasing diversity and increasing Hispanic enrollment reduce support for tax measures, offering support for Hypothesis 2 and some support for Hypothesis 1.

Consistent with Hypothesis 3, results suggest heterogeneous effects by the type of ballot measure. Specifically, an increase in the proportion of Black students increases the likelihood of passing a bond measure but reduces the likelihood of passing a property tax measure ($p < .05$ in the full model). In contrast, increasing diversity decreases the likelihood of passing a bond measure but increases the likelihood of passing a property tax measure ($p < .01$). These results support Hypotheses 3a and 3b. Shading indicates that coefficients predicting passage of a bond measure are significantly different from those predicting passage of a property tax measure ($p < .05$; Paternoster et al. 1998). In contrast, the proportion of Hispanic students reduces the likelihood of passing a bond measure ($p < .10$) and has no effect on passing a property tax measure. Thus, results suggest heterogeneous effects by race/ethnicity even when predicting support for bond and property tax measures separately. Overall, these results support Hypothesis 3 and suggest heterogeneous effects of district demographics by the type of tax measure. Figure 1 illustrates these different effects by the type of measure.

Predicted Number of Votes

A ballot measure could pass with relatively little voter support based on a small number of votes. Tables 4 and 5 predict an alternative measure of support for a ballot measure: the number of votes (logged). Using the same models as in Table 2, results in Table 4 suggest that an increase in diversity is related to a smaller number of votes on all measures and on bond measures ($p < .05$), but not when limited to property tax measures. The coefficient for diversity index when predicting number of votes on a bond measure is significantly different from that when predicting votes on a property tax ballot ($p < .05$). The proportion of Black

students is only marginally ($p < .10$) related to number of votes on a bond measure and is not significantly related to number of votes for all ballots or property tax ballots. However, coefficients for proportion Black students differ significantly for bond and property tax measures ($p < .05$). Thus, the results in Table 4 support Hypothesis 3 (and provide partial support for Hypothesis 2).

Table 5 shows results predicting the number of votes when addressing potential endogeneity using IV models. Results suggest that the proportion of Black residents reduces the number of votes on a measure, but when examining effects by type of ballot measure, this effect only holds among property tax measures ($p < .05$ in the full model). Coefficients for proportion Black students are significantly different by the type of tax measure when including all controls, but not in the more restricted model.

Similarly, coefficients for diversity index suggest that diversity increases the number of votes on a ballot measure when including all measures ($p < .01$). However, examining effects separately by the type of measure reveals that diversity reduces votes on a bond measure and increases votes on a property tax measure ($p < .01$). Coefficients differ significantly between bond and property tax measures in the restricted and full models ($p < .05$). Figure 2 illustrates these results, echoing Figure 1, and provides further evidence that the relationships between district demographics and voter support differ by the type of tax measure.

To summarize the results, evidence offers mixed support for Hypotheses 1 and 2 when predicting support for all measures. This is consistent with existing evidence. However, results offer consistent support for Hypothesis 3 and suggest that effects of demographic characteristics on voter support differ by the type of property tax measure. When accounting for potential endogeneity, results suggest an increasing proportion of Black students increases support for bond measures but reduces support for property tax measures. These results support Hypotheses 3a and 3b. In contrast, increasing diversity reduces support for bond measures and increases support for property tax measures, which contradicts Hypotheses 3a and 3b. Results suggest a null or weak relationship between voter support and the proportion of Hispanic students. Overall, increasing concentrations of Black students (rising proportion of Black students and declining diversity) increases support for bond measures but reduces support for property tax measures.

Discussion and Conclusion

Historically, state-level school funding formulas have been critical in achieving an adequate and equitable distribution of funds across districts. Yet, if the trends of school resegregation and state budget cuts continue, understanding how local communities respond to diminished state support for education becomes increasingly important. A return to emphasizing local funding risks returning to highly unequal funding outcomes between districts.

Our research has examined two key mechanisms that may contribute to this between-district inequality: school district demographics (particularly ethnic and racial makeup) and the type of local funding mechanism. When examining all measures, we find mixed evidence for

Tilly's notion of opportunity hoarding. Specifically, voter support is inconsistently related to diversity and with the shares of Black and Hispanic students.

However, we find that the relationships differ by the type of election measure. Previous research examining the impact racial diversity has on school funding election outcomes has produced inconsistent results. We suggest part of the reason for this inconsistency is an inadequate level of attention on the funding mechanism under consideration. We find that voter support for local school tax measures depends on demographic characteristics, but the relationship differs for bond and property tax measures. Specifically, an increasing proportion of Black students increases support for bond measures but reduces support for property tax measures. In contrast, increasing diversity (or a more even distribution of students across racial groups in a district) reduces support for bond measures and increases support for property tax measures.

Why would this variation exist? There are a few possible explanations. For instance, Hopkins (2009) theorized that towns in Massachusetts that were experiencing rapid demographic changes were less likely to support public good projects because White voters were less certain about their long-term prospects in the town. In our case, parcel taxes are established for finite periods of time and increase taxes by a specific amount in the near future, compared with bond measures which propose vague increases in the longer term future. The finite and short time horizon might help explain why districts with rising proportion of Black students are less likely to pass property tax increases.

Another possibility is variation in the progressivity of property tax and bond measures. Evidence that rising Black populations in a school district increases the likelihood of passing a bond measure—a more progressive funding mechanism—is broadly in line with previous research which has noted a similar association between the percentage of Latinos and greater progressivity of a state's tax structure (O'Brien 2017). However, O'Brien cautions that this finding might be based on the 1995–2007 time period of his analysis. Specifically, it is possible that much of the effect of Blacks or Whites on revenue and spending systems could have already been “locked in” before 1995 (O'Brien 2017, p. 1042). The similarity in our finding could likewise be a result of the similar time period in our study.

Finally, bond measures support improvements to school facilities, which are more visible to voters than program investments, which can be supported through property tax measures. These potential mechanisms highlight a key limitation of this study: It does not include information about voters' views or explanations for their support of particular measures. Thus, we are unable to adjudicate among these potential mechanisms. Additional research is needed to identify why the relationships between voter support and demographics vary by the type of measure. A second limitation is that analyses are limited to districts in California. Within-state comparisons allow more valid comparisons in this case. However, results may be unique to California. Thus, future research examining other states would permit a more complete exploration of how changing demographics influence voter support for local district funding measures.

Despite these limitations, results offer potential implications for school resources in the context of declining state funding and rising segregation. For example, results suggest that opportunity hoarding may manifest more in particular contexts. Specifically, voters may exhibit more opportunity hoarding behavior in districts with a rising proportion of Black students, but only when considering property tax measures (i.e., specific tax increases in the near future). Therefore, bond measures may hold more promise for local financial support of school districts with growing Black populations. In contrast, property tax measures may be more likely to garner support in districts with increasingly diverse student bodies—that is, when representation is becoming more evenly distributed across groups. Property tax measures allow districts to circumvent the Proposition 13 property tax rate limit (Jennison 2017) and raise revenue for operating costs. If this ability to supplement revenue is lower in districts with an increasing concentration of Black students, property tax measures may represent an increasingly important mechanism of racially unequal funding between districts.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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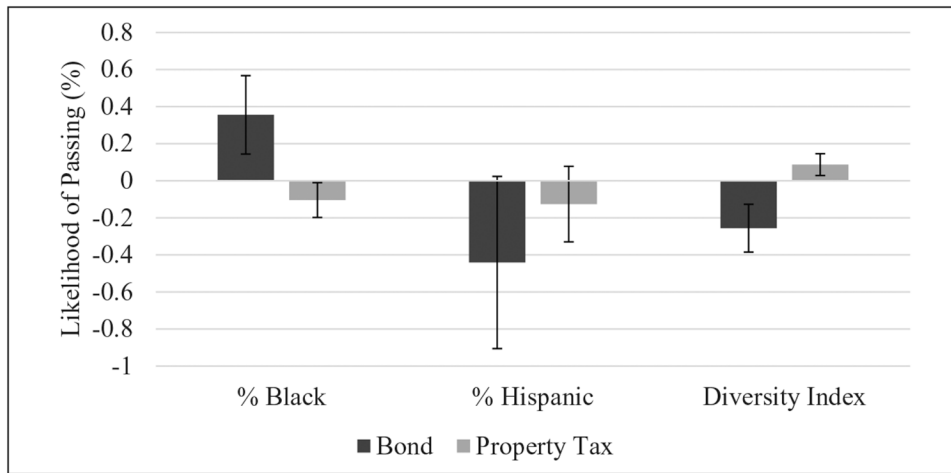


Figure 1. Estimated change in likelihood of passing for a standard deviation increase in each demographic measure by ballot type.

Source. Based on Table 3, models 4 and 6.

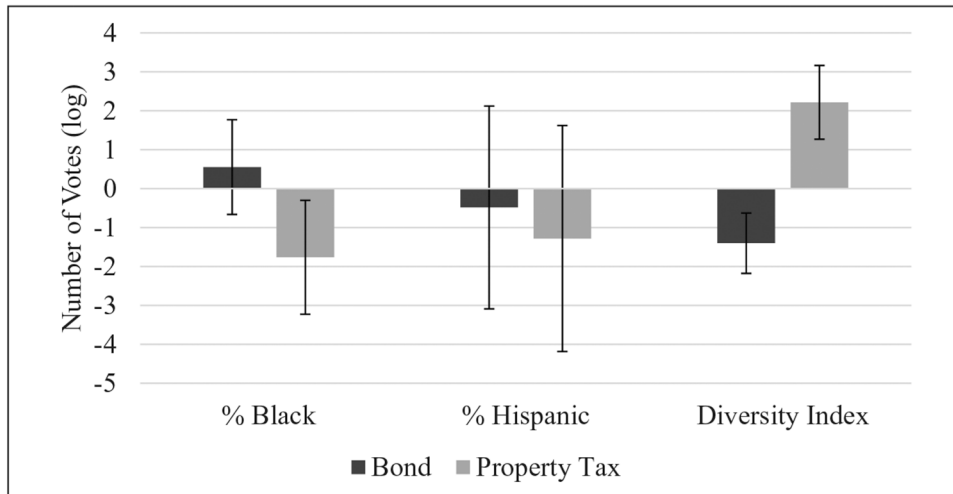


Figure 2. Estimated change in number of votes for a standard deviation increase in each demographic measure by ballot type.

Source. Based on Table 5, models 4 and 6.

Table 1.

Descriptive Statistics: District–Year Observations.

Variables	All District–Years		With a Ballot		All District–Years Above Median		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	% Black	% Hispanic	Diversity
% Pass	0.07	0.25	0.69	0.46	0.71	0.72	0.71
Number of votes	1,554.37	16,840.77	16,001.18	51,863.32	24,492.92	19,858.84	20,197.71
% Vote share	6.30	19.53	64.89	11.15	65.50	64.91	65.11
% Black	3.48	5.90	4.74	7.42	8.48	5.79	7.29
% Hispanic	34.81	27.60	34.32	26.06	36.47	55.55	34.52
Diversity index	0.44	0.17	0.48	0.17	0.57	0.52	0.62
% White	51.84	28.55	48.72	27.86	40.47	28.44	40.58
Total enrollment	6,224.51	23,621.49	11,106.91	45,813.58	17,909.48	16,513.32	12,063.20
District population	47,168.19	159,565.90	84,806.35	300,450.20	134,913.30	118,680.90	98,990.79
District population, ages 5–17	6,978.02	28,064.46	12,734.33	54,617.34	20,690.67	19,097.21	13,805.21
Median income—2014 dollars	58,709.01	14,899.94	65,529.47	16,410.98	67,333.16	62,335.76	67,503.87
District poverty rate, ages 5–17	0.18	0.11	0.16	0.10	0.16	0.20	0.15
Federal revenue/pupil, in thousands of 2014 dollars	1.00	0.98	0.78	0.67	0.81	1.00	0.81
% Free/reduced price lunch	37.20	29.97	31.88	28.39	32.83	45.08	32.36
% English Language Learner	13.32	16.89	14.36	16.48	14.87	23.10	14.67
% Special education	9.03	4.56	9.78	3.11	10.20	9.64	10.17
Ballot measure	0.10	0.30	1.00	0.00	1.00	1.00	1.00
Property tax measure	0.02	0.15	0.22	0.42	0.21	0.13	0.23
Bond measure	0.07	0.26	0.77	0.42	0.78	0.86	0.76
Year	2,004.29	5.66	2,004.24	5.59	2,003.97	2,005.12	2,005.07
<i>n</i>	18,046		1,753		876	876	876

Source. California Elections Data Archive (1995–2014), National Center for Education Statistics (NCES 1995–2014), and U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE 1995–2014).

Note. Sample is limited to district–year observations with demographic information.

Table 2.

Predicted Likelihood of Passing.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Pass		Pass Bond Measure		Pass Property Tax Measure	
% Black—std	0.111 ** (0.033)	0.127 ** (0.035)	0.094 * (0.042)	0.116 ** (0.043)	0.120 * (0.061)	0.115 (0.072)
% Hispanic—std	0.091 (0.075)	0.097 (0.081)	0.143 † (0.084)	0.098 (0.091)	0.013 (0.186)	0.022 (0.220)
Diversity index—std	-0.008 (0.031)	-0.016 (0.034)	0.004 (0.035)	0.004 (0.037)	-0.160 † (0.086)	-0.161 † (0.090)
Enrollment (log)—std	-0.304 (0.206)	-0.278 (0.214)	-0.520 * (0.219)	-0.256 (0.261)	-0.225 (0.390)	-0.281 (0.419)
District population (log)—std	-0.309 (0.321)	-0.440 (0.358)	-0.546 (0.391)	-0.542 (0.425)	0.437 (0.843)	0.430 (0.869)
District population, ages 5–17 (log)—std	0.663 * (0.269)	0.757 * (0.311)	0.890 ** (0.337)	0.758 * (0.373)	0.573 (0.440)	0.684 (0.642)
County median income—std 2014 dollars		0.044 (0.057)		-0.004 (0.082)		-0.033 (0.139)
District poverty rate, ages 5–17—std		-0.075 † (0.043)		0.019 (0.048)		0.008 (0.116)
Federal revenue/pupil—2014 dollars—std		0.041 * (0.020)		0.303 ** (0.079)		-0.017 (0.028)
Number of votes (log)—std		0.094 (0.062)		0.025 (0.067)		0.011 (0.123)
% Free/reduced price lunch—std		0.052 (0.039)		0.088 * (0.043)		0.145 (0.098)
% English Language Learner—std		-0.008 (0.038)		-0.046 (0.040)		0.038 (0.109)
% Special Ed—std		0.036 (0.031)		0.008 (0.037)		0.056 (0.059)
Constant	-89.403 ** (7.692)	-85.324 ** (8.581)	-84.949 ** (9.024)	-70.266 ** (10.580)	-127.057 ** (19.989)	-121.651 ** (21.931)
District and year fixed effects	Y	Y	Y	Y	Y	Y
State time trend	Y	Y	Y	Y	Y	Y
Observations	1,753	1,712	1,344	1,315	389	377
R ²	0.199	0.208	0.258	0.279	0.216	0.250
Number of districts	679	667	661	648	177	173

Source. Institute for Social Research (California Elections Data Archive 1995–2014), National Center for Education Statistics (NCES 1995–2014), and U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE 1995–2014).

Note. Sample is limited to district–year observations with demographic information. Shading indicates that coefficients predicting passage of a bond measure are significantly different from those predicting passage of a property tax measure ($p < .05$; Paternoster et al. 1998). Std indicates measure is standardized (i.e., measured in standard deviation units). Robust standard errors adjusted for district clustering are reported in parentheses.

† $p < .1$.

* $p < .05$.

**
 $p < .01$. Y= Yes.

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Table 3.

Predicted Likelihood of Passing: IV Analyses.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Pass		Pass Bond Measure		Pass Property Tax Measure	
% Black—std	0.151 (0.111)	0.263** (0.100)	0.257* (0.126)	0.356** (0.108)	-0.115 [†] (0.061)	-0.104* (0.048)
% Hispanic—std	-0.656* (0.270)	-0.564* (0.228)	-0.476 [†] (0.290)	-0.441 [†] (0.237)	-0.181 (0.133)	-0.126 (0.104)
Diversity index—std	-0.227** (0.082)	-0.178** (0.060)	-0.351** (0.093)	-0.256** (0.066)	0.133** (0.044)	0.087** (0.030)
Enrollment (log)—std	-0.102 [†] (0.058)	-0.171* (0.066)	-0.082 (0.060)	-0.175** (0.067)	-0.018 (0.023)	0.007 (0.023)
District population (log)—std	0.066 (0.091)	-0.016 (0.075)	0.135 (0.101)	0.043 (0.083)	-0.071 [†] (0.041)	-0.062* (0.031)
District population, ages 5–17 (log)—std	0.084 (0.092)	0.169 [†] (0.087)	-0.084 (0.101)	0.044 (0.092)	0.173** (0.048)	0.131** (0.039)
County median income—std 2014 dollars		0.017 [†] (0.009)		0.010 (0.010)		0.007 (0.006)
District poverty rate, ages 5–17—std		0.011 (0.007)		0.010 (0.008)		0.001 (0.003)
Federal revenue/pupil—2014 dollars—std		-0.004 (0.006)		-0.014* (0.007)		0.010** (0.003)
Number of votes (log)—std		0.068** (0.020)		0.037 (0.022)		0.031 [†] (0.016)
% Free/reduced price lunch—std		-0.016* (0.008)		-0.015 [†] (0.008)		-0.001 (0.003)
% English Language Learner—std		0.043** (0.016)		0.039* (0.017)		0.004 (0.007)
% Special Ed—std		-0.010 (0.006)		-0.010 (0.007)		0.000 (0.002)
District fixed effects	Y	Y	Y	Y	Y	Y
State time trend	Y	Y	Y	Y	Y	Y
Test of IV strength	7.93•	9.49•	7.93•	9.49•	7.93•	9.49•
Underidentification test	23.28**	27.68**	23.28**	27.68**	23.28**	27.68**
Endogeneity test	33.12**	28.72**	51.41**	44.81**	17.97**	10.97*
Observations	18,046	16,872	18,046	16,872	18,046	16,872
Number of districts	940	936	940	936	940	936

Source. Institute for Social Research (California Elections Data Archive 1995–2014), National Center for Education Statistics (NCES 1995–2014), and U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE 1995–2014).

Note. Sample is limited to district–year observations with demographic information. Shading indicates that coefficients predicting passage of a bond measure are significantly different from those predicting passage of a property tax measure ($p < .05$; Paternoster et al. 1998). Std indicates measure is standardized (i.e., measured in standard deviation units). Robust standard errors adjusted for district clustering are reported in parentheses. All models include district fixed effects, a state time trend, and an indicator for holding a ballot measure. Test of IV strength indicates Kleibergen–Paap rk Wald F statistic is above the Stock and Yogo (2005) critical values: \bullet = 15%, \circ = 20%, and \bullet = 25%. Underidentification test assesses whether the excluded instruments are correlated with the endogenous regressors. Using the Lagrange Multiplier (LM) version of the Kleibergen–Paap rk statistic, because standard errors are adjusted for clustering, rejecting the null hypothesis indicates the model is identified. Endogeneity test assesses whether the null hypothesis of no endogeneity (i.e., whether parental educational similarity could be treated as exogenous

and a traditional, non-IV model could be appropriate) can be rejected. In models predicting a continuous outcome, it indicates the difference between two Sargan–Hansen statistics, robust to heteroscedasticity (similar to a Hausman test, but for clustered data). IV = instrumental variable. Y= Yes.

\dagger
 $p < .1.$

$*$
 $p < .05.$

$**$
 $p < .01.$

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Table 4.

Predicted Number of Votes.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Total Votes (Log)		Total Votes (Log) Bond Measure		Total Votes (Log) Property Tax Measure	
% Black—std	0.074 (0.052)	0.059 (0.051)	0.101 [†] (0.058)	0.101 [†] (0.061)	-0.112 (0.079)	-0.109 (0.092)
% Hispanic—std	0.056 (0.090)	0.042 (0.098)	0.054 (0.108)	0.055 (0.127)	0.106 (0.195)	0.039 (0.232)
Diversity index—std	-0.082 [*] (0.035)	-0.092 [*] (0.037)	-0.119 ^{**} (0.043)	-0.112 ^{**} (0.043)	0.064 (0.059)	-0.015 (0.062)
Enrollment (log)—std	0.105 (0.249)	0.151 (0.285)	0.241 (0.287)	0.453 (0.329)	0.781 [†] (0.455)	0.852 (0.578)
District population (log)—std	0.737 (0.499)	0.790 (0.532)	0.562 (0.606)	0.638 (0.616)	-0.187 (1.051)	0.166 (0.970)
District population, ages 5–17 (log)—std	0.212 (0.311)	0.139 (0.354)	0.403 (0.461)	0.233 (0.483)	-0.220 (0.335)	-0.475 (0.508)
County median income—std 2014 dollars		-0.149 (0.104)		-0.135 (0.163)		-0.063 (0.113)
District poverty rate, ages 5–17—std		0.026 (0.058)		0.026 (0.064)		0.080 (0.129)
Federal revenue/pupil—2014 dollars—std		-0.006 (0.036)		0.213 [*] (0.096)		-0.041 (0.031)
% Free/reduced price lunch—std		-0.039 (0.055)		-0.070 (0.066)		-0.304 (0.274)
% English Language Learner—std		-0.020 (0.051)		-0.016 (0.059)		0.182 (0.222)
% Special Ed—std		0.038 (0.041)		0.081 (0.055)		-0.055 (0.067)
Constant	15.098 (11.240)	9.359 (13.985)	11.723 (14.356)	14.400 (19.351)	44.655 ^{**} (13.451)	21.476 (15.155)
District and year fixed effects	Y	Y	Y	Y	Y	Y
State time trend	Y	Y	Y	Y	Y	Y
Observations	1,753	1,712	1,344	1,315	389	377
R ²	0.251	0.256	0.304	0.311	0.276	0.293
Number of districts	679	667	661	648	177	173

Source. Institute for Social Research (California Elections Data Archive 1995–2014), National Center for Education Statistics (NCES 1995–2014), and U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE 1995–2014).

Note. Sample is limited to district–year observations with demographic information. Shading indicates that coefficients predicting passage of a bond measure are significantly different from those predicting passage of a property tax measure ($p < .05$; Paternoster et al. 1998). Std indicates measure is standardized (i.e., measured in standard deviation units). Robust standard errors adjusted for district clustering are reported in parentheses. Y= Yes.

[†] $p < .1$.

^{*} $p < .05$.

^{**} $p < .01$.

Table 5.

Predicted Number of Votes: IV Analyses.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	Total Votes (Log)		Total Votes (Log) Bond Measure	Total Votes (Log) Property Tax Measure		
% Black—std	-0.515 [†] (0.271)	-0.705 ^{**} (0.242)	0.332 (0.759)	0.553 (0.621)	-1.646 [†] (0.916)	-1.764 [*] (0.747)
% Hispanic—std	-0.147 (0.656)	-0.380 (0.561)	-0.729 (1.694)	-0.483 (1.329)	-0.982 (1.897)	-1.282 (1.481)
Diversity index—std	0.620 ^{**} (0.207)	0.571 ^{**} (0.166)	-2.039 ^{**} (0.576)	-1.402 ^{**} (0.395)	2.882 ^{**} (0.694)	2.217 ^{**} (0.483)
Enrollment (log)—std	0.013 (0.098)	0.130 (0.124)	0.402 (0.294)	0.069 (0.316)	-0.296 (0.377)	0.060 (0.392)
District population (log)—std	-0.091 (0.174)	0.085 (0.164)	1.560 ^{**} (0.557)	1.310 ^{**} (0.416)	-1.396 [†] (0.717)	-1.057 [†] (0.574)
District population ages 5–17 (log)—std	0.396 [†] (0.208)	0.278 (0.206)	-2.026 ^{**} (0.585)	-1.582 ^{**} (0.490)	2.723 ^{**} (0.741)	2.249 ^{**} (0.604)
County median income—std 2014 dollars		-0.000 (0.024)		0.012 (0.063)		-0.005 (0.071)
District poverty rate, ages 5–17—std		-0.011 (0.017)		0.037 (0.036)		-0.021 (0.050)
Federal revenue/pupil—2014 dollars—std		0.037 [*] (0.015)		-0.116 ^{**} (0.039)		0.185 ^{**} (0.047)
% Free/reduced price lunch—std		-0.006 (0.018)		-0.041 (0.043)		0.007 (0.056)
% English Language Learner—std		0.008 (0.039)		0.099 (0.092)		-0.005 (0.108)
% Special Ed—std		0.000 (0.015)		0.009 (0.030)		-0.024 (0.042)
District fixed effects	Y	Y	Y	Y	Y	Y
State time trend	Y	Y	Y	Y	Y	Y
Test of IV strength	7.93 [*]	9.46 [*]	7.93 [*]	9.46 [*]	7.93 [*]	9.46 [*]
Underidentification test	23.28 ^{**}	27.59 ^{**}	23.28 ^{**}	27.59 ^{**}	23.28 ^{**}	27.59 ^{**}
Endogeneity test	13.49 ^{**}	18.49 ^{**}	41.63 ^{**}	32.54 ^{**}	58.39 ^{**}	52.78 ^{**}
Observations	18,046	16,872	18,046	16,872	18,046	16,872
Number of districts	940	936	940	936	940	936

Source. Institute for Social Research (California Elections Data Archive 1995–2014), National Center for Education Statistics (NCES 1995–2014), and U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE 1995–2014).

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